

REMARKS/ARGUMENTS

Consideration of this Preliminary Amendment is respectfully requested. Claims 14-15, 17, and 19-22 remain in the application.

Original Claim 13, the only independent claim, has been extensively amended and divided into new Claim 19 setting for the required steps for performing the method and new Claims 20 and 21 dependent on Claim 19. New Claim 20 describes the optional step of determining the length of the musical notes. New Claim 20 defines how to determine the frequency of the musical notes according to a code. New Claim 22 takes the place of canceled Claim 16.

Rejections Under 35 U.S.C. § 112, second paragraph

Claims 13-18 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In an attempt to simplify examination, new Claim 19 has been drafted to remove those optional steps that appeared in canceled Claim 13. The rejections of Claim 13 that are applicable to new Claim 19 are rejections (a) – (g). Each rejection will be addressed in turn:

(a) The recitation of “temporal sequence of quantum vibration” (claim 13) is vague and indefinite because there is no definition of the term in the application.

This recitation has been removed from new Claim 19 which takes the place of Claim 13.

(b) The recitation of “minimizing the global harmonic ... frequencies surrounding said initial frequency” (claim 13) is vague, indefinite, and incomprehensible. This part of this rejection is repeated for reasons already of record (*e.g.*, Office Action mailed April 16, 2002, page 3, item (c)).

First, it is noted that the Examiner in the Office Action mailed April 16, 2002, page 3, item (c), provided no reason whatsoever as to why the objected to

recitation is vague or indefinite or incomprehensible. Nevertheless, the Applicant has deleted the objected to recitation and amended the claim to "*calculating the frequency of the musical notes*", which forms step (b)(ii) of new Claim 19. It is submitted that the new recitation is not indefinite, is fully supported by the specification and is fully enabled.

The new recitation is fully supported on page 10, lines 2-8 of the specification. In addition, this recitation is not indefinite because it is hard to understand when viewed without benefit of the specification as its purpose is not to explain how the technology works but to state the legal boundaries of the patent grant. *S3 Inc. v. NVIDIA Corp.*, 259 F.3d 1364, 59 USPQ 2d 1745, 1746 (Fed. Cir. 2001). This, the Applicant has done. In addition, the methodology (the "how to") for "calculating the frequency" is taught at the cited portion of the specification. It is respectfully requested that if the Examiner is to persist in this rejection that the Applicant be provided some basis for the rejection to which he can respond.

(c) The recitation of "transposing the resulting frequencies into the field of audible frequencies" (claim 13) is vague and indefinite because the term is not defined in the application. This part of this rejection is repeated for reasons already of record (*e.g.*, Office Action mailed April 16, 2002, page 3, item (f)).

This recitation, as amended, appears in new Claim 19, step (b)(iii). The only reason that this recitation has been objected to is that this term is not defined in the specification. The recitation is used in its ordinary sense and therefore the recitation is to be given ordinary and accustomed meaning; it therefore needs no further definition. *Gart v. Logitech, Inc.*, 254 F.3d 1334, 59 USPQ 2d 1290, 1295 (Fed. Cir. 2001). However, in an attempt to make the recitation even clearer, the objected to recitation has been amended to read "*transposing the frequencies of said musical notes into audible frequencies*". As noted in the specification, a method describing how to "transpose" is described in French patent no. 8302122

referenced on page 10, lines 17-18. It is respectfully submitted that the term "transposing the frequencies of said musical notes into audible frequencies" is not vague or indefinite. It is further requested that if the Examiner is to persist in this rejection that the Applicant be provided some basis for the rejection to which he can respond.

(d) The recitation of "for inhibition being deduced from the preceding code by symmetrization of the logarithms of the said audible frequencies around their central view" (claim 13) is vague and indefinite.

This term has been eliminated in new claim 19.

(e) The recitation of "central view" (claim 13) is vague and indefinite.

This term has been eliminated in new claim 19.

(f) The recitation of "the most significant similar series of notes and signatures which result in a melodically and harmonically coherent progression" (claim 13) is vague and indefinite. This part of this rejection is repeated for reasons already of record (*e.g.*, Office Action mailed April 16, 2002, page 3, item (i)).

The Applicant agrees that the recitation of "*the most significant similar series of notes and signatures which result in a melodically and harmonically coherent progression*" might be better worded. The intent of the phrase, simply put, is to provide for the selection of notes, *i.e.* the musical period, that are to be played in step (d). Therefore, the rejected recitation has been amended to read "determining the musical periods by identifying a similar series of said musical notes". If there is something indefinite about this phrase, it would be helpful for the Examiner to be specific as to what is of concern.

It appears that the Examiner is also concerned that the rejected phrase does "not teach how to identify ...". If so that is not a rejection for indefiniteness. Even if the issue of "how to" is of concern to the Examiner it should not be

because the specification provides at least three methods showing "how to" determine the musical period. Method I is found at page 10, line 19-page 11, line 11. Method II may be found at page 11, lines 12-25. Method III may be found at page 11, line 26 – page 12, line 2.

(g) The recitation of "musical periods" vague and indefinite because the term is not defined. This part of this rejection is repeated for reasons already of record (*e.g.*, Office Action mailed April 16, 2002, page 3, item (j)).

The term "musical periods" has been rejected as vague and indefinite only because the term is not defined. There is no requirement that applicant must define every expression in a patent application. When there is no "special definition provided the term is given its ordinary and accustomed meaning. *Gart, supra*. The term "musical periods" is used in its ordinary sense. No further

The above discussions address all of the 35 U.S.C. § 112, second paragraph issues raised with respect to canceled Claim 13 that are present in new Claim 19. In summary, of the seven rejections, 3 of the rejected terms have been deleted, 2 of the rejected terms relates to definitions of the terms as used in their ordinary sense, and the remaining 2 rejected terms ((b) and (f)) have been amended. It is therefore respectfully submitted that the rejection under Section 112, second paragraph, with respect to new independent Claim 19 has been overcome.

Rejections (h) through (k) relate to terms that have been deleted from Claim 13 or that appear in new Claim 20.

(h) The recitation of "adjusting the phrasing to the measure" (claim 13) is vague and indefinite because the term is not defined. This part of this rejection is repeated for reasons already of record (*e.g.*, Office Action mailed April 16, 2002, page 3, item (l)).

The recitation "*adjusting the phrasing to the measure*" appears in new Claim 20. It was rejected because the term was not defined in the specification. The term is used in its ordinary and accustomed sense. *Gart, supra*. No further definition is required. By way of explanation, it occasionally happens that the musical

period, *i.e.*, the sequence of musical notes needs to be altered by adjusting the length of the notes. When it is necessary to make such adjustment the musical period is corrected so that the melodic passages that follow one another can be found in the same place inside the measure. From this correction the individual lengths (timing) of the musical notes are deduced, *e.g.*, 2/4, 4/4 or the like. This operation of adjusting the phrasing to the measure is comparable to lengthening the vowels of a sung text.

(i) The recitation of “using a keyboard featuring a ‘one key play’ device” (claim 13) is vague and indefinite because it is not understood what is meant by the phrase.

This term has been deleted from the claims.

(j) The recitation of “tone quality” (claim 13) is vague and indefinite because the term is not defined. This part of this rejection is repeated for reasons already of record (*e.g.*, Office Action mailed April 16, 2002, page 4, item (n)).

The terms “tone quality” and “timbre” have been deleted from the claims.

(k) The recitation of “determining the tone quality ... the closest timbre in a palette of given ones” (claim 13) is vague and indefinite because the meaning of the passage is not understood. This part of this rejection is repeated for reasons already of record (*e.g.*, Office Action mailed April 16, 2002, page 4, item (o)).

The recitation “determining the tone quality . . .” has been deleted from the claims.

New Claim 21 includes the recitation of “minimizing the global harmonic ... frequencies surrounding said initial frequency”. This term was rejected in rejection (b) above wherein the examiner stated: “(claim 13) is vague, indefinite, and incomprehensible. This part of this rejection is repeated for reasons already of record (*e.g.*, Office Action mailed April 16, 2002, page 3, item (c)).”

New Claim 21 is intended to claim an optional method determining the frequency of the musical notes according to a code, which also enable one to give a more precise frequency value to each musical note. This is done by obtaining the frequency of each amino acid in their free state (proportional to their mass) by minimizing the global harmonic distance calculated for all possible pairs of musical notes being the harmonic intervals globally the closest to the corresponding proper frequency ratios. It is submitted that one skilled in the art would understand this term and therefore it is not indefinite. See, *S3 Inc. v. NVIDIA Corp., supra*. The methodology for determining the code is taught in the specification and thus, this phrase is enabled. If the Examiner is to persist in this rejection, it is requested that the Applicant be provided with some specific basis for the rejection.

Rejections (l) and (m) were applied to Claim 16. Claim 16 has been cancelled and replaced by new Claim 22. Discussions of rejections (l) and (m) follow.

(l) The recitation of “further stabilizing” (claim 16) is incomplete because there is no antecedent basis for the passage. The amendment of claim 16 does not establish a previous stabilization, hence there is no antecedent basis for “further” stabilizing.

New Claim 22 has been amended to delete the word “further”.

(m) The recitation of “grouped quantum vibrations arising from the spatial conformation of the protein ... denoting the central values” (claim 16) is incomprehensible. This part of this rejection is repeated for reasons already of record (*e.g.*, Office Action mailed April 16, 2002, page 5, item (z)). The amendment makes the claim no clearer.

Notably, the Examiner has not indicated why this recitation is incomprehensible. Quite obviously, those skilled in the art understand the phrase. However, in an attempt to clarify this issue prior Claim 16 has been canceled and rewritten as new Claim 22. The purpose of this claim is to address a method for determining

the code for the colors. Support for new Claim 22 appears in the specification at page 15, lines 17-24. If this new language is rejected it would be helpful if the Examiner would provide some reason so that the Applicant can have a fair change to respond.

The claim rejections noted as (n) through (t) all relate to Claim 18. Claim 18 has been cancelled; therefore these rejections are now moot.

(u) Claims 14 and 15 were rejected as incomplete because they depend from cancelled claim 1.

Claims 14 and 15 have amended to correct this deficiency.

In view of the discussion set forth above it is sincerely believed that each of the rejections under Section 112, second paragraph have been satisfactorily addressed and that this rejection should now be withdrawn.

Rejections Under 35 U.S.C. § 112, first paragraph

Claims 13-18 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The recitation of "or timbre by comparing ... closest timbre in a palette of given ones" is new matter.

New Claim 19 sets forth the following language:

"determining the tone quality by comparing the repartition of the music sequence of the amino acid chain to the average repartition of those notes of the whole protein to determine which harmonies must be raised or lowered"

This language is taken directly from the specification. *See page 14, lines 14-18.* In view of new claim 19, it is respectfully submitted that this rejection is now moot.

Claims 13-18 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the

art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Each of the points mentioned in the rejection hereinabove (items (a) – (t)) is incorporated here. The invention is not described in such a way that one of skill in the art could understand and/or practice the invention. This rejection is repeated for reasons already of record (*e.g.*, Office Action mailed April 16, 2002, page 6, second full paragraph).

The Examiner appears to reject each of the terms discussed in the rejections under 35 USC §112, ¶2, namely (a) through (t) as not being enabled. The Applicant has addressed each of the enablement issues relating to new Claim 19, where appropriate, in the discussions above relating to rejections (a) – (g). More specifically, only rejections (b), (c) and (f) raise an issue with regard to enablement. In each case the enablement issue has been addressed. It is therefore believed that this rejection as applied to Claim 19 has been overcome. Claim 18 has been canceled so that can be no enablement issue regarding rejections (n) through (t). Of the remaining rejections, namely (h) through (m) only (h) and (m) raise any issue with regard to enablement. In each case the Applicant has shown that the rejected recitation is enabled. Therefore, this rejection as applied to the remaining claims should be withdrawn.

Rejection Under 35 U.S.C. § 101

Claims 13-18 are rejected under 35 U.S.C. 101 because the disclosed invention is inoperative and therefore lacks utility. This rejection is repeated for reasons already of record (paper no. 19, pages 11-12) are not convincing. None of the evidence alluded to by applicant measures protein biosynthesis, but only monitor some gross activity (*e.g.*, growth or biomass production of plants as set forth in Annexes F1 and G1 and light production by *Vibrio fischeri* in Annex H).

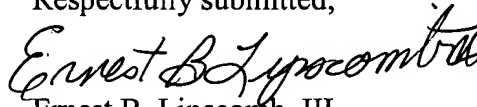
The specification itself provides guidance on “how to” obtain the sequence of musical notes in , for example, Examples 1-4. In Examples 5 and 6 the utility of the method for protein synthesis is demonstrated. In further support Dr. Sternheimer has presented further evidence regarding utility through Declarations earlier filed in this case. Thus, the operativeness and utility of the claimed invention has been shown to be capable of doing the things claimed and thus it has practical utility. Perfection is not required. *National Recovery Techs. Inc. v.*

Magnetic Separation System, Inc., 49 USPQ 2d 1671, 1676 (Fed. Cir. 1999). The Examiner is further reminded of the Federal Circuit admonition in *In re Cortright*, 49 USPQ 2d 1464, 1469 (Fed. Cir. 1999) that "statements that a physical phenomenon was observed are not inherently suspect simply because the underlying basis for the observation cannot be predicted or explained." In view of the Federal Circuit law, it is difficult to understand how a claim may lack utility yet at the same time be enabled.

As pointed out above, the claims are enabled; therefore, the method clearly has utility. It is therefore respectfully requested that the Examiner reconsider this rejection in light of the prevailing Federal Circuit law.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,



Ernest B. Lipscomb, III

Registration No. 24,733

Customer No. 00826

ALSTON & BIRD LLP

Bank of America Plaza

101 South Tryon Street, Suite 4000

Charlotte, NC 28280-4000

Tel Charlotte Office (704) 444-1000

Fax Charlotte Office (704) 444-1111

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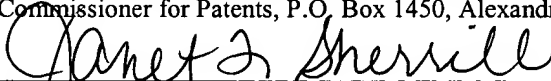
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Janet F. Sherrill